

S/N TBD
Docket: CS03-046
Group art unit : __ TBD

Date 12/22/2003

**To: Commissioner of Patents and Trademarks
P.O. Box 1450 Alexandria, VA 22313-1450**

**Fr: William J. Stoffel Reg. No. 39,390 CUST NO. 30402
PMB 455
1735 Market St - Suite A
Philadelphia, PA 19103**

Subject:

Serial No. TDB
Docket CS03-046
File Date: with application
Inventor: Tan et al.

**title: Shallow Amorphizing Implant For Gettering Of
Deep Secondary End Of Range Defects**

INFORMATION DISCLOSURE STATEMENT

Enclosed is Form PTO A820 (also PTO-1449), Information
Disclosure Citation and references.

CERTIFICATE OF MAILING OR EXPRESS MAILING

I hereby certify that this correspondence is being deposited with the
United States Postal Service as first class mail in an envelope addressed
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Signature/Date

William J. Stoffel 12/22/03
William J. Stoffel Reg. No. 39,390
Customer number 30402

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The following Patents and/or Publication are submitted to comply with the duty to disclose under CFR 1.97-1.99 and 37 CFR 1.56.

US 2003/0013260A1 (Gossmann et al.) a method of implanting vacancy-generating ions into a preselected region of the body.

US 2003/0096490 A1 - Borland, et al. - A method for forming a shallow junction in a semiconductor wafer may include amorphizing the wafer, implanting a dopant material into the wafer, and activating the dopant material by thermal processing. The control of the EOR depth through a preamorphizing implant to less than the junction depth provides for a low leakage junction and the low-temperature SPE anneal prevents diffusion of the dopant beyond the desired junction depth.

US 2002/0001926 A1 -Noda - shows a process for a Ir pocket implant.

US 6,537,886b2 (Lee) and US 2001/0041432A1 Lee show a shallow jct process.

US 2003/0049917 A1 (Noda) shows a multiple I/I and anneal process.

US 6,475,885B1 (Sultan) shows a S/D formation process.

Noda, "Evolution of end-of-range damage and transient enhanced diffusion of indium in Silicon", Journal of applied physics, vol 91, #2 15 Jan 2002, pp 639-645.

Yeh et al., "Optimum halo structure for sub-0.1. μm CMOSFETs, IEEE trans on electronic devices, vol. 48, # 10, Oct 2001, pp. 2357 -2362.

S/N TBD

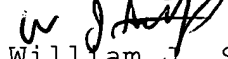
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Lisebarger, et al., "Study of end of range loop interactions with B[sup +] implant damage using a boron doped diffusion layer", J. Appl. Phys. 78 (4), 15 August 1995, pp. 2298-2302.

Lu et al., "Reduction of secondary defect formation in MeV B + ion-implanted Si(100)", Appl. pHys. Lett, 655 (18), 30 Oct 1989. pp. 1838 - 1840.

Sincerely,



William J. Stoffel

Reg. No. 39,390

Customer number 30,402

INFORMATION DISCLOSURE CITATION <i>(Use several sheets if necessary)</i>				Docket Number (Optional) CS03-046		Application Number	
				Applicant(s) Tan			
				Filing Date		Group Art Unit	

U.S. PATENT DOCUMENTS							
*EXAMINER INITIAL	REF	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
		US 2003/0013260A1		Gossmann et al.			
		US 2003/0096490 A1		Borland, et al			
		US 2002/0001926 A1		Noda			
		US 6,537,886b2		Lee			
		US 2003/0049917 A1		Noda			
		US 6,475,885B1		Sultan			

FOREIGN PATENT DOCUMENTS								
	REF	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
							YES	NO

OTHER DOCUMENTS <i>(Including Author, Title, Date, Pertinent Pages, Etc.)</i>		
		Noda, "Evolution of end-of-range damage and transient enhanced diffusion of indium in Silicon", Journal of applied physics, vol 91, #2 15 Jan 2002, pp 639-645.
		Yeh et al., "Optimum halo structure for sub-0.1. m CMOSFETs, IEEE trans on electronic devices, vol. 48, # 10, Oct 2001, pp. 2357 -2362.
		Lisebarger, et al., "Study of end of range loop interactions with B[sup +] implant damage using a boron doped diffusion layer", J. Appl. Phys. 78 (4), 15 August 1995, pp. 2298-2302.
		Lu et al., "Reduction of secondary defect formation in MeV B + ion-implanted Si(100)", Appl. pHys. Lett, 655 (18), 30 Oct 1989. pp. 1838 - 1840.

EXAMINER	DATE CONSIDERED
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EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP Section 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.